

## EPA Official Record

**Notes ID:** 8B4298DD281406FA662C61576DE4AFB3

**From:** Chris Hill <chris.hill@chk.com>

**To:** Michael Overbay/R6/USEPA/US@EPA; "Lukert, George" <GLukert@ene.com>

**Copy To:** Bert Smith <bert.smith@chk.com>; Cassi Vann <cassi.vann@chk.com>; "Quina, Chris" <CQuina@ene.com>; Debby McElreath <debby.mcelreath@chk.com>; Fonda Manwell <fonda.manwell@chk.com>; "Florentino, Gene" <GFlorentino@ene.com>; John Satterfield <john.satterfield@chk.com>; "Mike Brownell" <mike.brownell@chk.com>; Nancy Coleman <nancy.coleman@chk.com>; Robert Puls/ADA/USEPA/US@EPA; Susan Mravik/ADA/USEPA/US@EPA

**Delivered Date:** 08/31/2011 08:12 AM EDT

**Subject:** RE: EPA HF Study - EPA Stakeholder Meeting Minutes (8/26/2011)

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I will add monitoring well construction to our agenda for Friday. Please keep the attached Louisiana Water Well Registration, Construction and Closure regulation in mind.

Mike,

Would you mind forwarding the EPA guidance document that you referenced below?

Thanks,

Chris

From: Overbay.Michael@epamail.epa.gov [mailto:Overbay.Michael@epamail.epa.gov]

Sent: Tuesday, August 30, 2011 4:10 PM

To: Lukert, George

Cc: Bert Smith; Cassi Vann; Chris Hill; Quina, Chris; Debby McElreath; Fonda Manwell; Florentino, Gene; John Satterfield; Mike Brownell; Nancy Coleman; Puls.Robert@epamail.epa.gov; Mravik.Susan@epamail.epa.gov

Subject: RE: EPA HF Study - EPA Stakeholder Meeting Minutes (8/26/2011)

Hi George,

I noted that on the above grade completion, you are showing your well pad as 1 meter from the well to the edge of the pad, which would make the pad 2 meters wide. All of the well pads I have constructed were approximately 3' x 3' square for 2" casing, or 4' x 4' for 4" casing, with the well in the center.

(Although EPA guidance allows round well pads, they are difficult to frame up out of lumber!) Also, the pad should extend a minimum of one inch below the adjacent ground surface to prevent erosion and undercutting.

On the flush mount well completion, the 1% slope is too little, as it would not provide effective drainage or run-on prevention. I would prefer you indicate that the well cap must be positioned a minimum of 1.5" above paved adjacent surfaces. Because flush mounted wells are more likely to allow infiltration, they should be avoided except in areas where traffic cannot be avoided.

Michael Overbay, P.G.  
Regional Ground Water Center Coordinator  
U.S. Environmental Protection Agency - Region 6  
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(214) 665-2191 (FAX)  
Visit the Ground Water Center on the web at:  
[www.epa.gov/earthlr6/6wq/swp/groundwater/gw.htm](http://www.epa.gov/earthlr6/6wq/swp/groundwater/gw.htm)

From: "Lukert, George" <GLukert@ene.com>  
To: "Chris Hill" <chris.hill@chk.com>, Robert Puls/ADA/USEPA/US@EPA, "Florentino, Gene" <GFlorentino@ene.com>  
Cc: "Mike Brownell" <mike.brownell@chk.com>, "Fonda Manwell" <fonda.manwell@chk.com>, "Debby McElreath" <debby.mcelreath@chk.com>, "Nancy Coleman" <nancy.coleman@chk.com>, "Bert Smith" <bert.smith@chk.com>, "Cassi Vann" <cassi.vann@chk.com>, "John Satterfield" <john.satterfield@chk.com>, Susan Mravik/ADA/USEPA/US@EPA, Michael Overbay/R6/USEPA/US@EPA, "Quina, Chris" <CQuina@ene.com>  
Date: 08/30/2011 01:08 PM  
Subject: RE: EPA HF Study - EPA Stakeholder Meeting Minutes (8/26/2011)

Chris,

Attached are two monitoring well schematics for an above ground completion and a flush mount completion. While not pictured on the above ground completion, it would typically include concrete filled posts set around the well head as needed. Let me know if you have any questions.

Thanks,

George

George M. Lukert, P.G.  
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Description: 40  
Celebrating 40 Years of Green Solutions

From: Chris Hill [mailto:[chris.hill@chk.com](mailto:chris.hill@chk.com)]  
Sent: Tuesday, August 30, 2011 10:03 AM  
To: [puls.robert@epa.gov](mailto:puls.robert@epa.gov); [overbay.michael@epa.gov](mailto:overbay.michael@epa.gov); Quina, Chris; John Satterfield; Lukert, George; Florentino, Gene; [Mravik.Susan@epamail.epa.gov](mailto:Mravik.Susan@epamail.epa.gov)  
Cc: Mike Brownell; Fonda Manwell; Debby McElreath; Nancy Coleman; Bert Smith; Cassi Vann  
Subject: EPA HF Study - EPA Stakeholder Meeting Minutes (8/26/2011)

The meeting minutes for last Friday's conference call are provided below. I would appreciate if you would keep me honest and let me know if I missed

anything from our discussions.

8/26/2011 Minutes:

- Quality Assurance Project Plan (QAPP)
  - o CHK has been provided with Draft QAPP for comments.
  - o EPA has requested that CHK comment on the entire document, paying particular attention to the sections dealing with flowback and produced water sampling.
  - o EPA will need to finalize the QAPP document at the end of September.
  - o ACTION: CHK should provide all comments to the EPA by September 12th, 2011.
  - o CHK Preliminary comments were discussed, as outlined in further detail below.

- Sampling Methods and Data
  - o Opportunities for improvement in selected key parameters
- ACTION: CHK to provide more detail of needed parameters in final comments
  - o QAPP currently references EPA Analytical Methods that are not standard SW Series methods. ACTION: EPA will ensure SW method equivalents are provided for the selected methods in the final QAPP.
  - o CHK requested level of Data Package to be included. EPA will use QA Level 1 and will include standard description in QAPP.
  - o CHK has noted that the suggested 15-day period for sampling of produced water should be extended to at least 45 days, or preferably 60-90 days.
  - o ACTION: EPA to provide electronic copies of proposed analytical methods (Bob, 9/2/2011 IN PROGRESS)
  - o A separate Sampling and Analysis Plan (SAP) will not be developed.

- Monitoring Wells
  - o Current priority is to identify monitoring well location and design.
  - o CHK has concerns that necessary sample volumes may cause issues for any low-producing wells. EPA has indicated that studies are ongoing to identify monitoring well locations and avoid any low-producing areas within the aquifer.
  - o Submersible or bladder pumps will be used for deeper wells.
  - o CHK has noted that 18 monitoring wells have been noted in the Draft QAPP (as opposed to the originally discussed 8).
  - o Based on ongoing geological study results, this number will possibly be reduced.
  - o CHK has indicated the sampling of domestic water wells is not preferable. EPA has indicated that domestic wells will only be used for baseline and comparison samples and will not be included in the monitoring well network.
  - o ACTION: EPA is to propose alternative design plan for monitoring well network and soil sampling (Bob, 8/31/2011)

- Communication Plan
  - o Community Involvement and Communication
    - \$ Landowner agreements are typically handled by EPA. EPA will set up face-to-face meeting to discuss sampling activities and explain study, and to request property access for monitoring wells or to sample domestic wells.
    - \$ Sampling results will be made available to landowners.
    - \$ ACTION: Develop a draft communication plan (Chris, 9/12/2011 IN PROGRESS)
  - o Data Management
    - \$ Data sharing between CHK/EPA will be necessary during study.
    - \$ ACTION: EPA and/or E&E to develop FTP site for all study data and materials and will provide CHK with access (Bob/Gene, 9/2/2011 IN PROGRESS).
  - o Security
    - \$ Security measures are needed for the study location and monitoring wells to avoid tampering and contamination.
    - \$ Monitoring wells are typically installed with steel casing and locking covers.
    - \$ ACTION: E&E to send CHK typical water well locking vault design (Gene, 9/2/2011 IN PROGRESS)

· Workshop Materials

o ACTION: Send all CHK presentations and abstracts from EPA Technical Workshop to EPA and E&E. (Chris, COMPLETE)

· Schedule

o ACTION: Work with CHK operations to identify an optimum spud date in April 2012 (Chris, 9/2/2011 IN PROGRESS). Spud date should be decided next week.

· Meetings

o Meetings will be conducted weekly instead of biweekly until further notice. ACTION: Bi-weekly conference call to be changed to weekly (Chris, COMPLETE)

o The next meeting will be September 2nd, 2011.

· Previous Actions:

o ACTION: Send E&E current version of map for QAPP. (Chris, COMPLETED)

o ACTION: Work with CHK operations to identify an optimum spud date between Jan. 15 and April 31, 2012 (Chris, 8/26/2011 IN PROGRESS)

o ACTION: Identify experienced water well contractor. (Chris, 8/26/2011 IN PROGRESS)

§ Potential Contractors:

· Walker-Hill (Baton Rouge) - Capable of drilling deep wells using either mud-rotary or roto-sonic methods. Roto-sonic is best to about 300-400 ft, especially if continuous coring is requested. Walker-Hill doesn't have in-house e-logging capabilities, but could subcontract the work out to others (e.g., Century Geophysical (Tulsa)).

· Layne Company (Offices in Tyler, Baton Rouge and Jackson MS, among others) are the Cadillac of water well drilling. 800-1000 ft water wells are standard. Core business is water well drilling more than a geotech/environmental drilling company. They have very experienced operators, sophisticated equipment and programs. They do large, high profile projects involving large public works and private clients (e.g., Baton Rouge Water Corp). Might provide that sense of professionalism and confidence that this study might benefit from. They have lots of other resources in the company, including in-house e-logging capabilities that include (typical suite) SP, natural gamma, and dual induction resistivity.

o ACTION: Send QAPP to CHK. Ensure confidentiality statement is present in the footer. Email sections upon completion. (Gene, 8/19/2011 COMPLETE)

Please let me know if you have any questions or comments.

Thank you,

Chris Hill

Environmental Engineer

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